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CGS 7.3.2 SW Release Notes

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This document issue provides the description of the CGS SW release 7.3.2.

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2/-	07.05.2010	All	Version for 7.2.1
3/-	30.09.2010	All	Version for 7.2.2
4/-	23.05.2011	All	Version for 7.3.0
5/-	15.03.2012	All	Version for 7.2.3
6/-	05.10.2012	All	Version for 7.3.1
7/-	23.11.2012	All	Version for 7.2.4
8/-	16.04.2013	All	Version for 7.3.2

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1. Introduction

1.1 Identification and Scope

This document is the CGS 7.3.2 SW Release Notes. The release is identified by document CGS SRO (ESO-IT-SRO-0204).

CI Name:	CGS SW
CI Number:	1130992
CI Variant:	7.3.2

1.2 Purpose

The purpose of this software release is a delivery of a tested version of CGS for official use.

1.3 Document Layout

This document has the following layout:

Chapter 1 provides the document identification and identifies under which CI this document is prepared. It also identifies the next higher level component CI. Chapter 1 also provides an overview of the purpose of the document and the overall document structure.

Chapter 2 provides the list of documents which are applicable or are referenced.

Chapter 3 provides an overall description of the release. Thus in this chapter all SW products being integrated are listed including the temporary fixes necessary to run the SW. This chapter also provides the identification of CCU versions being used for the SW product integration (if any).

Chapter 4 provides an overview of the release status. This includes a statement on the current test status and the identification of SPRs being fixed with this release.

Chapter 5 provides the installation instruction for the CGS SW.

Chapter 6 provides a list of abbreviations being used

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2. Applicable and Reference Documents

CGS Documents:

	name	issue	date
Technical Note			
ESO-IT-RN-0110	CGS SW Release Notes (Linux)	8	16.04.2013
CGS-RIBRE-TN-0002	The CGS Authorization Concept	2/B	04.09.2006
SW Release Order			
ESO-IT-SRO-0204	CGS Software Release Order (Linux)	8	16.04.2013
User Manuals			
CGS-RIBRE-SUM-0001	CGS User Manual	13/-	28.02.2013
CGS-RIBRE-SUM-0002	CGS Installation Manual (Linux)	9/-	15.02.2013
CGS-RIBRE-SUM-0003	MDA Reference Manual	1/G	05.04.2012
CGS-RIBRE-SUM-0004	MDA Administration Manual - see COL	1/-	
CGS-RIBRE-SUM-0005	DADIMA Reference Manual	1	09.11.2001
CGS-RIBRE-SUM-0006	DADIMA Administration Manual	1	09.11.2001
CGS-RIBRE-MA-0001	UCL Debugger User Manual	1	01.09.2004
CGS-RIBRE-MA-0003	call - A tool to add a graphical user interface to command line based programs	1/-	01.03.2006
CGS-RIBRE-MA-0004	"mdb - MDB Access Tool"	1/A	01.02.2009
CGS-RIBRE-MA-0005	"generate - Text Generation Tool"	1/-	01.03.2006
CGS-RIBRE-MA-0006	CDU Merge Users Manual	1	14.03.2006
CGS-RIBRE-MA-0007	Start Center - A generic user interface for multi-process systems	1/C	04.09.2007
CGS-RIBRE-MA-0008	An XML Based Configuration Concept	1/-	01.10.2006
CGS-RIBRE-MA-0010	Logger - A client/server based logging system	3/-	28.02.2013
COL-RIBRE-MA-0018-00	MDA Administration Manual	4/B	31.03.2000
COL-RIBRE-MA-0030-00	MDA Introduction Manual	3/B	04.04.1997
COL-RIBRE-MA-0037-00	DADIMA Introduction Manual	3	04.04.1997
COL-RIBRE-MA-0046	SID Range Tool Users and Operations Manual	1	15.09.1997
Reference Manuals			
CGS-RIBRE-STD-0001	User Control Language (UCL) Reference Manual	5/-	29.01.2010
CGS-RIBRE-STD-0002	High Level Command Language (HLCL) Reference Manual	5/-	29.01.2010
CGS-RIBRE-STD-0003	Virtual Stack Machine and I-Code Reference Manual	5/-	29.01.2010
COL-RIBRE-STD-0008	Reference Manual for Crew Procedure Language and Software, Commanding	1/F	31.10.2001
Requirements Specifications			
CGS-RIBRE-SPE-0001	Columbus Ground System (CGS) Requirement Specification	2/D	23.03.2004
CGS-RIBRE-SPE-0002	CGS Test Case Specification and Test Procedure	7/-	30.06.2008
Design Documentation			
COL-RIBRE-ADD-0006	Columbus Ground System (CGS) Software Architectural Design Document	4/B	30.10.1997
Interface Definitions			
CGS-RIBRE-ICD-0001	System to CGS ICD	1/-	31.01.2002
CGS-RIBRE-ICD-0002	MDB Standard Entities and Application Program Interface	1/-	
ESO-IT-LI-0070	List of IRNs fromCGS-RIBRE-ICD-0001	1	01.07.2008
ESO-IT-LI-0071	List of IRNs from CGS-RIBRE-ICD-0002	1	01.07.2008

USS Documents:

	name	issue	date
SW Release Note			
ESO-IT-RN-0095	USS 2.22.0 Release Note	4/-	16.04.2013
SW Release Order			
ESO-IT-SRO-0143	USS SW 2.22.0	6/-	16.04.2013

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3. Release Overview

3.1 CCU Version Identification

This CGS SW Release provides no mission database content.

3.2 Integrated Products

In following table all SW components are identified necessary to build this release of the CGS SW.

- CGSI
- CLS
- DBS / Command History
- GWDU
- HCI
- MDA / CGS_MDB_V7_3_2
- TES
- TEV
- TSCV
- TSS
- CGS_API

3.3 Release Media & their Contents

The System is delivered on DVD as described in SW Release Order (ESO-IT-SRO-0204).

3.4 Identification of the Generation and Test Environment

The CGS SW Generation environment is based on commercial baseline described in chapter 4.3 Commercial Baseline.

The CGS Test environment is based on commercial baseline described in chapter 4.3 Commercial Baseline.

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4. SW Release Status

4.1 Release Status

The release status is: **VALIDATED**

The SPRs fixed in this release have been regression tested as documented in the CGS SPRdb. It has been assessed that the code changes have no impact to the qualification status of other SW modules of CGS as released in former versions.

4.2 Test Status

This CGS SW was tested on commercial baseline. The test status is delta qualified by CGS - AIV.

4.3 Commercial Baseline

- ✓ Suse Linux Enterprise Server 10 / ServicePack2 / 32 bit
  - Recommended patch: glibc-2.4-31.63.7.i686.rpm, glibc-devel-2.4-31.63.7.i686.rpm
- ✓ Oracle 11.2.0.3.0 standard one edition
- ✓ CGS API build with gnat 6.4.1 (*)
- ✓ CIS CORBA Server built with PrismTech OrbAda OrbAda 3.0_V110722 (CORBA 2.5, GIOP 1.2)
- ✓ USS version 2.22.0 (build-20130416-1637) @ 93849 (*)
- ✓ Java 1.6.0_14 (*)

This CGS SW release shall be executed on Intel PC with SUSE Linux Enterprise Server 10 (SLES10 - 32 bit) based environments.
(*) marked components are available on CGS delivery

4.4 Recommended Hardware Baseline

- ✓ It is recommended to use NVIDIA graphic card and the proper NVIDIA driver for usage of USS.

4.5 Compatibility Statement

The CGS software is not compatible to CGS 7.2.1 / 7.2.2 / 7.3.0 (internal version) at all.

- The MDB versions from CGS 7.2.1 to CGS 7.3.1 are upward compatible to the CGS 7.3.2 MDB.
- The Special Application Software (SAS) build with CGS API CGS 7.2.0 / 7.2.1 / 7.2.2 / 7.3.0 are not compatible to current CGS version.
- The simulation models are not compatible and have to rebuild due to changes in CSS.
- The I-Code and the used UCL system libraries are fully compatible to CGS 7.2.2.
- The CGS 7.2.1 / 7.2.2 / 7.3.0 / 7.3.1 command history database is not compatible to CGS 7.3.2 command history software. Therefore a new installation of command history database is requested.

CGS is still able to run under Oracle 11R1, but an update to Oracle 11R2 is recommended.

4.6 New or Updated Components

All software components are updated.

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4.7 New features in CGS 7.3.2

What's new in CGS 7.3.2 (in different to CGS 7.2.2 / CGS 7.3.0 / CGS 7.3.1)?

With this current version CGS is able to run on Oracle standard one edition in version 11.2.0.3.0.

In following all major changes since CGS 7.2.2 are listed below:

4.7.1 (CGS 7.3.0) CGS Online Control (HCI) are based now on GtkAda (SPR-102237)

CGS Online Control has been changed. The XView toolkit has been replaced by GtkAda toolkit. HCI has now a modern look and feel user interface.

Look into user manual for the detailed description.

The major changes are:

- based on GtkAda
- no GIPSY support - synoptics are displayed in USS only
- the status line was removed

4.7.2 (CGS 7.3.0) Better integration of USS in CGS (SPR-101861)

Different interactions as result of a system library calls initiated by USS are now handled in the CGS content correctly. Following system library calls are affected:

- READ_MESSAGE_FROM_USER
- WRITE_MESSAGE_TO_USER
- READ_NUMBER_FROM_USER
- START_PROGRAM
- OPEN_AP_OUTPUT_WINDOW
- CLOSE_AP_OUTPUT_WINDOW

The required action will be done by the parent HCI, which is starting the USS application.

Additional for the quick line graph the USS application will be used now instead of a GIPSY-based application.

4.7.3 (CGS 7.3.1) USS provides User Interfaces for CIS calls (SPR-102596)

Different interactions as result of a system library calls initiated by USS are now handled in USS directly. Following system library calls are affected:

- DISPLAY_PICTURE
- READ_MESSAGE_FROM_USER
- READ_NUMBER_FROM_USER

USS is able to create user pop up windows on request directly, if no connection to HCI is possible.

4.7.4 (CGS 7.3.0) Support tool for upgrade monitoring configurations and screen setups (SPR-102379)

There is a new support tool to upgrade and change older monitoring definitions and screen setups. Nevertheless HCI is able to load old monitoring definitions and screen setups from former CGS versions.

```
> $CGS_HOME/gsaf/hci/bin/linuxi/screen_setup_tool -h
screen_setup_tool <- Screen Setup Tool.
  -help ["..."]    <- print help text ["..." = long]
  -verbose         <- Verbose mode.
```


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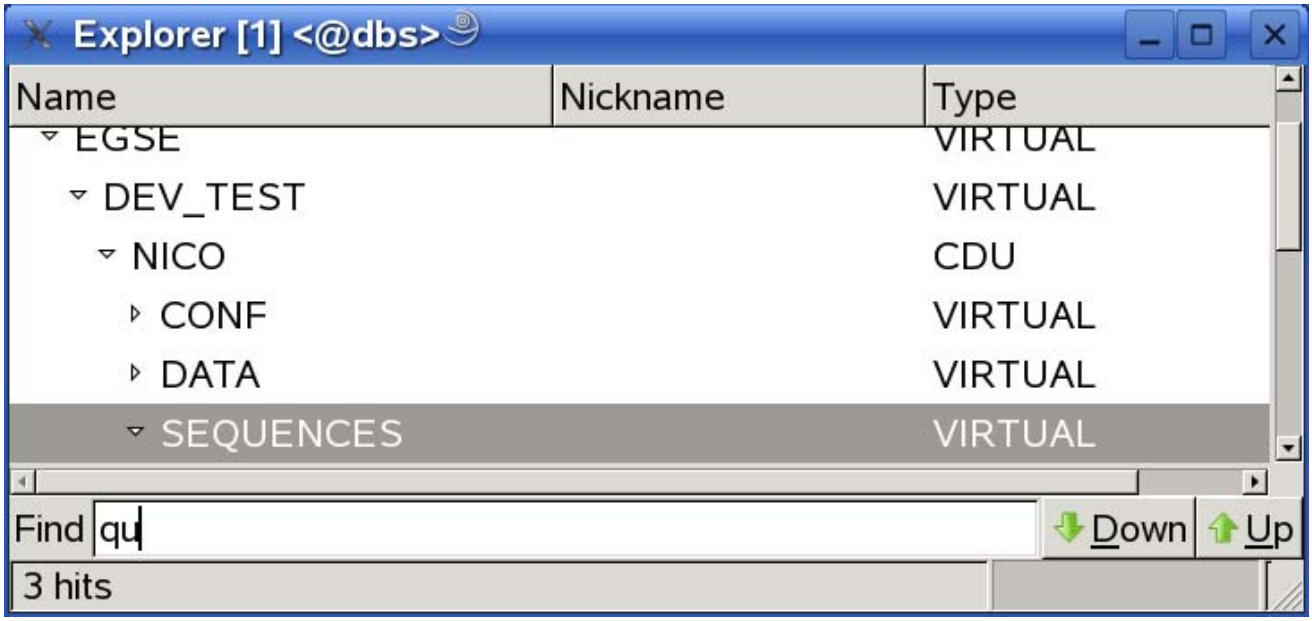
```
upgrade          <- Upgrade previous screen setups/monitoring window definitions to current version.
  <source>...    <- List of source files.

remove           <- Remove column definitions from OOL and Monitoring window parameters.
  <source>...    <- List of source files.

mw_replace     <- Replace column definitions of Monitoring window parameters by those from template.
  <source>...        <- List of source files.
  -template <value> <- Filename of a monitoring window configuration used as template.
```

4.7.5 (CGS 7.3.2) HCI: CGS_TOOLS entry in main menu configurable (SPR-102702)

The CGS_TOOLS application is disabled by default from the Online Control (HCI) main menu. To enable it, change the CGS configuration parameter Online_Test_Control.CGS_Tools.ShowMenuEntry to TRUE and restart Online Control.

4.7.6 (CGS 7.3.2) HCI: Search in explorer (SPR-102685)

In Online Control explorer a search function was integrated:



4.7.7 (CGS 7.3.2) HCI: Search for HLCL sequences in file system (SPR- 102701)

In Online Control HLCL Commanding window it is possible to select HLCL command sequences from file system via File->Open menu. The sequences are not started automatically - the user has to confirm the execution.

4.7.8 (CGS 7.3.0) CGS Print-Service Housekeeping Values are obsolete (SPR-102321)

Following CGS print service housekeeping variables are removed:

```
C_Pr1_Status : constant T_Identifier := 1_001;
C_Pr2_Status : constant T_Identifier := 1_002;
C_Pq1_Status : constant T_Identifier := 1_003;
C_Pq2_Status : constant T_Identifier := 1_004;
C_Pq1_Jobs   : constant T_Identifier := 1_005;
C_Pq2_Jobs   : constant T_Identifier := 1_006;
```

Following error message will be displayed during usage of obsolete housekeeping values in message window:

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Error in configuration data. (\.<Nickname>)
<Pathname> use an obsolete HK value with ID: <Hk_Id> , which is not longer supported. For compatiblily reasons it will be defined as normal SW variable. Please correct in the MDB!

4.7.9 (CGS 7.3.0) New CGS Housekeeping Value for count of measurements with processing disabled (SPR-101862)

CGS adds a new CGS Housekeeping Value "Number of not processed (processing disabled) items":

```
C_Nb_Not_Processed : constant T_Identifier := 325
```

4.7.10 (CGS 7.3.0) New system privilege CIS:HLCL_ABORT_AP

The new CGS system privilege CIS:HLCL_ABORT_AP enables CIS clients to execute the HLCL commands ABORT_AP and ABORT_ALL_APS.

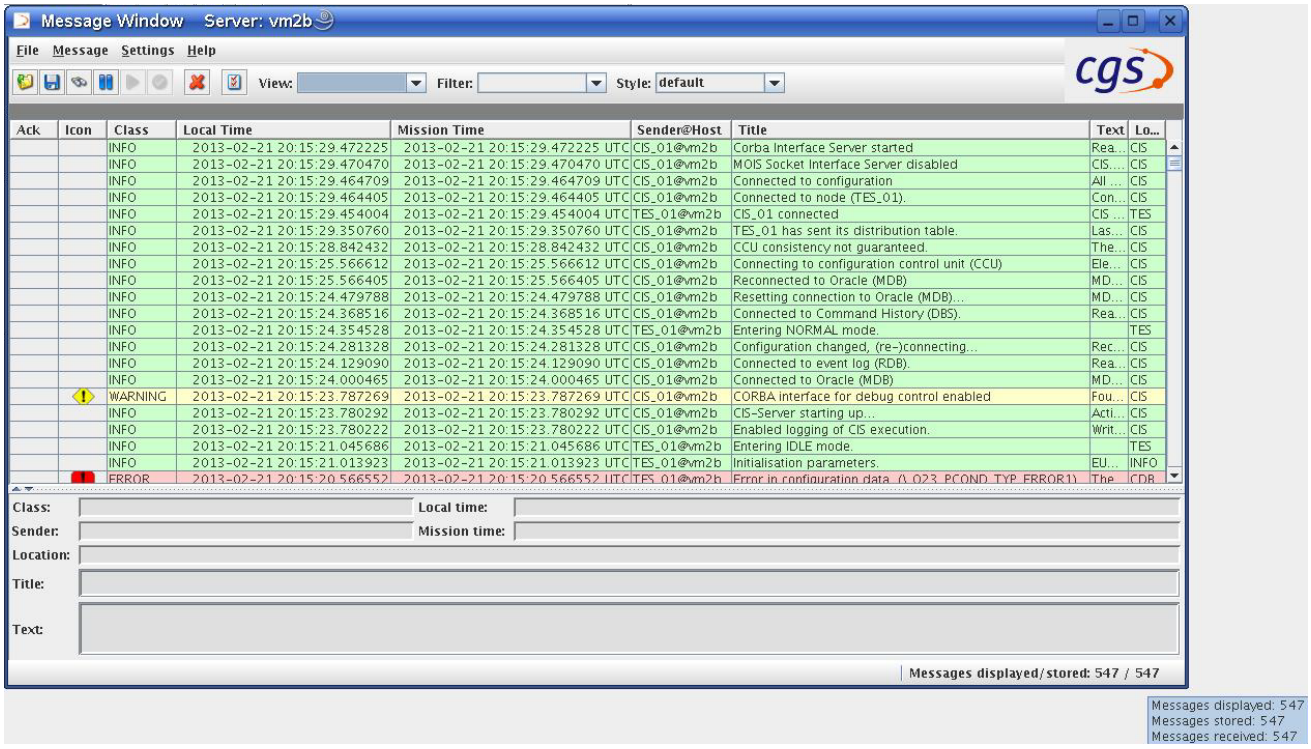
4.7.11 (CGS 7.3.0) New event message mechanism (SPR-102236)

CGS has implemented a new event mechanism. All events are sent to a single event logger per CGS. This event logger receives all messages, distributes the messages to message clients and archives.

The message structure has been changed. It is now a CSV-based ASCII structure.

A default archiver logs all messages to a daily log file (syntax: YYYY-MM-DD.log) in directory *$CGS_HOME/local/data/log* and optional to TRDB, if available.

All messages are displayed with milliseconds accuracy in new message window. The same tool is used to display stored events from TRDB as well as stored log files and for online display. A detailed description is given in [CGS-RIBRE-MA-0010].


Message Window Server: vm2b
File Message Settings Help
View: Filter: Style: default
Ack Icon Class Local Time Mission Time Sender@Host Title Text Lo...
INFO 2013-02-21 20:15:29.472225 2013-02-21 20:15:29.472225 UTC CIS_01@vm2b Corba Interface Server started Rea... CIS
INFO 2013-02-21 20:15:29.470470 2013-02-21 20:15:29.470470 UTC CIS_01@vm2b MOIS Socket Interface Server disabled CIS... CIS
INFO 2013-02-21 20:15:29.464709 2013-02-21 20:15:29.464709 UTC CIS_01@vm2b Connected to configuration All ... CIS
INFO 2013-02-21 20:15:29.464405 2013-02-21 20:15:29.464405 UTC CIS_01@vm2b Connected to node (TES_01). Con... CIS
INFO 2013-02-21 20:15:29.454004 2013-02-21 20:15:29.454004 UTC TES_01@vm2b CIS_01 connected CIS ... TES
INFO 2013-02-21 20:15:29.350760 2013-02-21 20:15:29.350760 UTC CIS_01@vm2b TES_01 has sent its distribution table. Las... CIS
INFO 2013-02-21 20:15:28.842432 2013-02-21 20:15:28.842432 UTC CIS_01@vm2b CCU consistency not guaranteed. The... CIS
INFO 2013-02-21 20:15:25.566612 2013-02-21 20:15:25.566612 UTC CIS_01@vm2b Connecting to configuration control unit (CCU) Ele... CIS
INFO 2013-02-21 20:15:25.566405 2013-02-21 20:15:25.566405 UTC CIS_01@vm2b Reconnected to Oracle (MDB) MD... CIS
INFO 2013-02-21 20:15:24.479788 2013-02-21 20:15:24.479788 UTC CIS_01@vm2b Resetting connection to Oracle (MDB)... MD... CIS
INFO 2013-02-21 20:15:24.368516 2013-02-21 20:15:24.368516 UTC CIS_01@vm2b Connected to Command History (DBS). Rea... CIS
INFO 2013-02-21 20:15:24.354528 2013-02-21 20:15:24.354528 UTC TES_01@vm2b Entering NORMAL mode. TES
INFO 2013-02-21 20:15:24.281328 2013-02-21 20:15:24.281328 UTC CIS_01@vm2b Configuration changed, (re-)connecting... Rec... CIS
INFO 2013-02-21 20:15:24.129090 2013-02-21 20:15:24.129090 UTC CIS_01@vm2b Connected to event log (RDB). Rea... CIS
INFO 2013-02-21 20:15:24.000465 2013-02-21 20:15:24.000465 UTC CIS_01@vm2b Connected to Oracle (MDB) MD... CIS
WARNING 2013-02-21 20:15:23.787269 2013-02-21 20:15:23.787269 UTC CIS_01@vm2b CORBA interface for debug control enabled Fou... CIS
INFO 2013-02-21 20:15:23.780292 2013-02-21 20:15:23.780292 UTC CIS_01@vm2b CIS-Server starting up... Acti... CIS
INFO 2013-02-21 20:15:23.780222 2013-02-21 20:15:23.780222 UTC CIS_01@vm2b Enabled logging of CIS execution. Writ... CIS
INFO 2013-02-21 20:15:21.045686 2013-02-21 20:15:21.045686 UTC TES_01@vm2b Entering IDLE mode. TES
INFO 2013-02-21 20:15:21.013923 2013-02-21 20:15:21.013923 UTC TES_01@vm2b Initialisation parameters. EU... INFO
ERROR 2013-02-21 20:15:20.566552 2013-02-21 20:15:20.566552 UTC TES_01@vm2b Error in configuration data. (\.023_PCOND_TYP_ERROR1) The... CDB
Class: Local time:
Sender: Mission time:
Location:
Title:
Text:
Messages displayed/stored: 547 / 547
Messages displayed: 547
Messages stored: 547
Messages received: 547

The count of displayed and stored (i.e. in message window temporary available) messages is shown in the footer of the message window, a complete overview including of the count of received messages since last start is shown as tooltip (SPR-102703 solved with CGS 7.3.2).

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Due to the new message mechanism some changes are necessary and for some interfaces a mapping is needed.

- The **executable** *send_message* is removed and will be replaced by *write_message* with a changed parameter profile. If you are not able to adapt the calls for the new message service for some reasons, you can use for this purpose the wrapper script *$CGS_HOME/gsaf/cgsi/bin/common/send_cgs_message.sh*. The executables *message_handler* and *message_server* are removed.
- The **CORBA IDL** is unchanged, but due to the changes of the message structure some mappings are necessary:
  - The old severities are mapped now to the new message classes.

```
/** Datatype for the severity of a message of the CGS Message. */
/** Remark: Since CGS 7.3.0 the CGS serverity has been changed.*/
  enum LogEventMessageSeverity {
  /** INFO mapped to INFO */
      INFO,
      /** MSG  mapped to INFO */
      MSG,
      /** WRN  mapped to WARNING */
      WRN,
      /** ERR  mapped to ERROR */
      ERR,
      /** ALRM mapped to FATAL */
      ALRM,
      /** EXC  mapped to ERROR */
      EXC
    };
```

  - The extraText field in the LoggedEventMessage and LogEventMessage is obsolete. If it is given, it will add to longText field. The predefined length restrictions are obsolete.
  - The Exception ServiceNotAvailable will be raise for calls of subscribeEventLog and getEventLogReport.
- The **CGS_API** call *SEND_ERROR_MESSAGE* for event logging is unchanged.
- The **system library** call *WRITE_MESSAGE_TO_USER* is for compatibility reasons unchanged, but the parameters WORKSTATION and ALL_WORKSTATIONS are unused now.

4.7.12 (CGS 7.3.0) New environment variable $CGS_EDITOR (SPR-101681)

CGS uses now the environment variable $CGS_EDITOR as default editor. The default is set to */opt/kde3/bin/kwrite*, but it can be changed by the user. The tool *textedit* is not longer supported.

The default configuration for a CGS installation can be changed in the CGS installation configurator, tab CGS, ASCII Editor.

4.7.13 (CGS 7.3.0) New EVL file format

The Engineering Value Log (EVL) file format has been changed from binary to a CSV-based ASCII format.

4.7.14 (CGS 7.3.2) CGS uses ORACLE enterprise edition (SPR-102608)

With this version CGS supports the use of following Oracle editions:

- Oracle Database 11g Enterprise Edition Release 11.2.0.3.0
- Oracle Database 11g Standard Edition Release 11.2.0.3.0
- Oracle Database 11g Standard Edition One Release 11.2.0.3.0

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4.7.15 (CGS 7.3.0) CGS is now able to run without ORACLE based TRDB (SPR-102093)

CGS allows now to configure the usage of TRDB with a new configuration parameter *System.Trdb_Storage*.

It specifies the storage location of TRDB data:

Database : The TRDB data are stored in Oracle database and in filesystem

Filesystem : The TRDB data are stored in filesystem only (not yet implemented)

None : No TRDB data are stored, except event messages below $CGS_HOME/local/data/log

In this CGS version it is possible to use an Oracle-based TRDB or no TRDB, whereby the default is Oracle-based TRDB.

For details see CGS-RIBRE-MA-0010.

4.7.16 (CGS 7.3.0/7.3.2) Changed command line parameter profile for export, import, deletion and list of command history (SPR-102351 and SPR-102718)

CGS extends the options for export, import, delete and list of command history data. In following the command line parameter profiles are listed in detail:

```
> $CGS_HOME/gsaf/dbs/util/common/command_history/export_partitions --help

Administration Commands                                          export_partitions

NAME
            export_partitions

SYNOPSIS
            Usage:  export_partitions  [--all  |  --current  |  [--from_date  from_date  &|  --to_date
to_date]] [--mode] [--site] [--directory] [--force] [--gzip] | [--help]

DESCRIPTION
            This script exports data from command history database partitions into files.

PARAMETERS
            --current|-c         exports the current partition
            --all|-a             exports all partitions
            --from_date          exports partitions where command date >= from_date
                                 date format: YYYY-MM-DD or DD-MON-YYYY
                                 example    : 2010-08-01 or 01-OCT-2010
            --to_date            exports partitions command date <= to_date
            --mode|-m            filter on operational mode
            --site|-s            filter on site
            --directory|-d       export directory
            --force|-f           force file if already exists
            --gzip|-g            gzip export file
            --help|-h            Help


> $CGS_HOME/gsaf/dbs/util/common/command_history/import_partitions --help

Administration Commands                                          import_partitions

NAME
            import_partitions

SYNOPSIS
            Usage: import_partitions [--file] | [--helph]

DESCRIPTION
            This script imports data from files stored by the export_partitions script
            into command history database partitions.

PARAMETERS
            --file|-f            filename or directory name
            --help|-h            Help

> $CGS_HOME/gsaf/dbs/util/common/command_history/delete_partitions --help

Administration Commands                                          delete_partitions

NAME
            delete_partitions

SYNOPSIS
```


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```
            Usage: delete_partitions --all | --from_date from_date &| --to_date to_date | --help [--
mode] [--site] [--force]

DESCRIPTION
            This script deletes data from command history database.

PARAMETERS
            --all|-a            exports all partitions
            --from_date         deletes partitions where command date >= from_date
                                date format: YYYY-MM-DD or DD-MON-YYYY
                                example    : 2010-10-01 or 01-OCT-2010
            --to_date           deletes partitions where command date <= to_date
            --mode|-m           filter on operational mode
            --site|-s           filter on site
            --force|-f          never prompt
            --help|-h           Help
```

```
> $CGS_HOME/gsaf/dbs/util/common/command_history/list_partitions --help

Administration Commands                                          list_partitions

NAME
            list_partitions

SYNOPSIS
            Usage: list_partitions [--mode] [--help]

DESCRIPTION
            This script lists all command history table partitions.

PARAMETERS
            --mode|-m           group report by operational mode and by site
            --help|-h           Help
```

4.7.17 (CGS 7.3.2) Command History supports operational mode (SPR-102718)

In this version CGS supports additional configuration parameters to identify commands in the command history. Each command can be identified with operation mode key value and site key value. A CGS configuration value change is automatically detected and will force the usage of new key values for new inserted commands.

The default behaviour (default configuration) is still the same as in former CGS versions.

- DBS.Command_History.Operational_Mode

  Sets the given Operational_Mode parameter as value for each new command insert into the command history for key-value pair with key=Operational_Mode.

  The Operational_Mode parameter must be a string without spaces.

  Recommended value: "

- DBS.Command_History.Site

  Sets the given Site parameter as value for each new command insert into the command history for key-value pair with key=Site.

  The Site parameter must be a string without spaces.

  Recommended value: "

- DBS.Command_History.Mode_And_Site_Check_Delay

  Sets the delay between two checks for checking the configuration in seconds.

  The configuration parameters Operational_Mode and Site will be checked after this given delay. The command history changes the key-values if needed.

  Remark: 0 means the dynamic check is disabled!

  Range: 0 [s].. 3600 [s]

  Recommended value: 0

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4.7.18 (CGS 7.3.0) Final Archive SAS has been removed

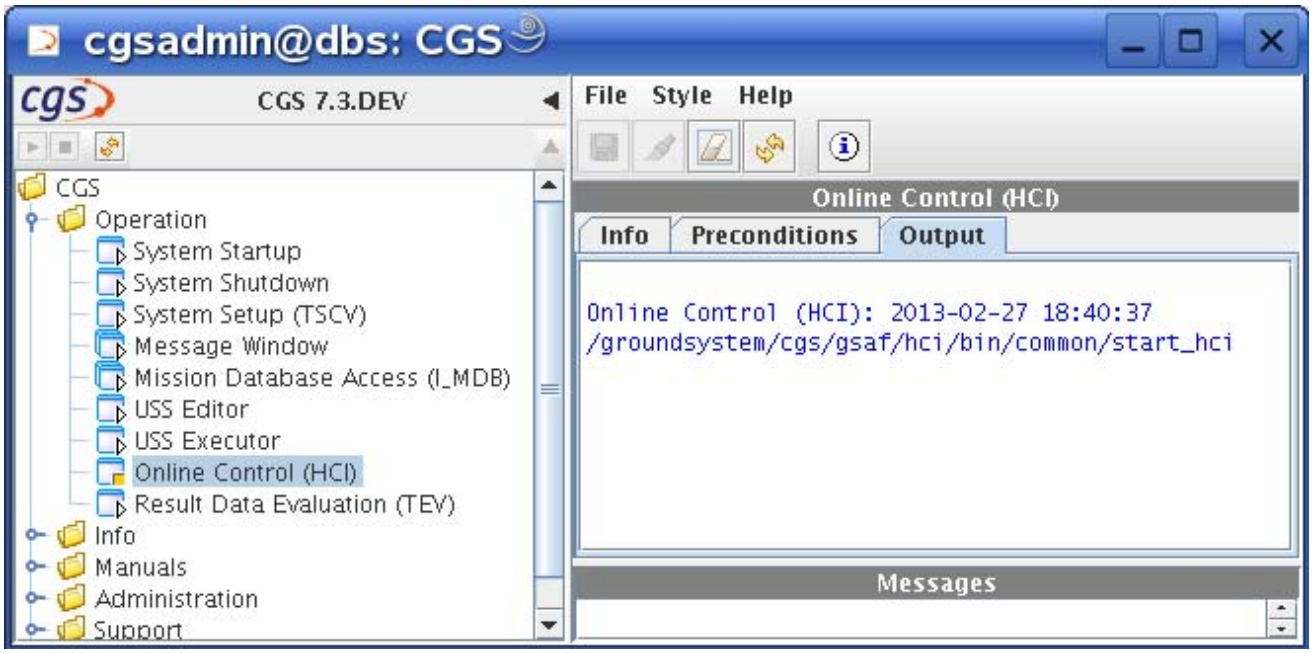
The external process to export and import Execution Sessions has been integrated into the DBS processes. The functionality in TEV to export and import is available, but no extra process with a user interface will be used.

The user interface in TEV for archiving has been removed.

The Final Archive mechanism in TSCV is still available, but it is now an export of the closed session without deletion of existing online session.

4.7.19 (CGS 7.3.2) Start Center: Show command lines after execution (SPR-102020)

The CGS start center displays the executed commands together with a time tag and the command line:



4.7.20 (CGS 7.3.0) CSS changes (summary)

Due to some changes in CSS it is necessary to recreate all CSS model within the new CGS version. The changes in detail are:

- SPR-101995 : Give each kernel its individual shared memory/semaphore resources

  Resources are addressed via a unique <model_key>, which has to be passed to model_connection.Start by both kernel and CMAS (which receives it from the kernel as 1st parameter).

  This should guarantee that each kernel can create its required shared memory/semaphores; cleanup of obsolete resources still has to be implemented to avoid consumption of system resources.

  NOTE for CMAS implementation:

  1. Parameters of $CMAS_HOME/bin/common/start_cmas call by kernel have been changed:

  start_cmas <model_key> <milbus_config_path> <shm_var_size> <shm_stat_size>

  2. Parameters of model_connection.Start have been changed - see model_connection.ads

- SPR-102324: use MODEL_KEY for CMAS SV file name as well (only for TMP file shared with CMAS)

  NOTE for CMAS implementation:

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Only use Model_Connection.CMAS_SV_TMP_FILE_PATH to read/create CMAS SV file; must have called Model_connection.Start with Model_Key received from kernel first!

- SPR-102155 : Make css_kernel_if extensions for MOCS_SAS CGS standard interface

  MOCS_SAS version adapted:

  - changed to non-generic package

  - extended to support multiple parallel kernel connections from one application

  This requires some changes in MOCS_SAS to adapt to the changed package interface.

  Changed css_start_kernel script to start kernel in background and check for MOCS info file, writing its output to a logfile (needs adaptation of MOCS) and setting exit status: 0=OK, 1=FAIL

- SPR-102139: fixed UNIX_SOCKETS.hton*/ntoh*

  some data types changed from signed (still used for historical reasons) to unsigned

- SPR-101948: check TSS status before calling TSS service; report only status changes to client.

  Added one initial 'TSS available' status message in the MOCS console window.

- CSS kernel messages in message window now identify as <model>@<host> instead of kernel@<host>

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4.8 SW Problem Status

4.8.1 SPR Status and Impact Analysis

For this release 50 SPR's are solved.

ID	TITLE	EXTERNAL REFERENCE
SPR-102020	(Start Center) Show command lines after execution	
SPR-102346	message_window: add argument to define startup position	
SPR-102452	TP 72: performance_3_eventlog.log reports errors	
SPR-102576	message_window: sort by local time very slow and not indicated as busy	
SPR-102608	CGS uses ORACLE enterprise edition	
SPR-102670	CSS: wrong evaluation of return status	
SPR-102671	Message Window: configuration of memory heap size	
SPR-102674	CIS reports POSIX_ERROR when MCS Tools get commands from command history	
SPR-102675	TEV data set generation slower than in CGS 5.2	
SPR-102680	Message Window: Find Message Dialog Should Get Focus When Opened	
SPR-102682	message window: title not shown in separate message window, if scroll bar is shown	
SPR-102683	message_window: preferences not persistent	
SPR-102684	TES reports DBS errors after disconnection from DBS	
SPR-102686	message_window: no incoming message filter possible	
SPR-102687	message_window: no updates	
SPR-102688	ground_library call Close_ap_output_window doesn't work	
SPR-102696	HK Value CGS_ARCH_COLLECT incorrect	COL-RIBRE-SPR-23056
SPR-102697	CIS cancels TM service for USS Executor if second execution node is turned off	
SPR-102700	remove GIPSY from CGS installation (MCS COL-CC wishlist)	
SPR-102701	remove unwanted part after HCI Drag	
SPR-102702	make CGS_TOOLS entry in HCI main menu configurable (MCS COL-CC wishlist)	
SPR-102703	show number of all received messages (MCS COL-CC wishlist)	
SPR-102704	Upgrade procedure is needed for downgrade of MDB/CMDH and for deletion of TRDB (MCS COL-CC wishlist)	
SPR-102706	data resume messages as class ERROR	
SPR-102707	message_window: filter selection list not sorted	
SPR-102708	message window: bad visualization in detailed message window	
SPR-102711	DBS: Error in MA_EXECUTION.INSERT_PARTICIPATING_APPLICATIONS	
SPR-102714	Enable the CGS/CSS user to unpack a CSS model without using the GUI tool CSS/MDE	COL-RIBRE-SPR-24951
SPR-102715	Enable the CGS/CSS user to export sim_states or sim_tables without using the GUI tool CSS/MDE	COL-RIBRE-SPR-24952
SPR-102718	MCS Command History to support operational mode	COL-RIBRE-SPR-24965
SPR-102720	Oracle Upgrade for CGS 7.3.x to version 11gR2	COL-RIBRE-SPR-24970

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SPR-102721	TSCV in batch save session name in TRDB mode = None	
SPR-102722	TEV batch doesn't check TRDB mode parameter	
SPR-102726	WARNING: Unable to retrieve NTP status	COL-RIBRE-SPR-24995
SPR-102727	NO HLCL INTERPRETER AVAILABLE	COL-RIBRE-SPR-24999
SPR-102728	Observables from ADUs not included in XML files	COL-RIBRE-SPR-25018
SPR-102730	Swtich to a new testsession in batch mode does not work	COL-RIBRE-SPR-25051
SPR-102731	Tool IDE+ReportGenerator is missing in I_MDB after a complete installation of CGS	
SPR-102738	CONSTRAINT_ERROR - Message: cis-service_provider.adb:196 tag check failed	
SPR-102739	ucl_user_library not compiled, but compile requested	
SPR-102740	CLS: Error in HLCL case statement	
SPR-102741	TP58: 65 TP-Errors	
SPR-102742	message_window: text in column not readable when searching	
SPR-102773	HCI: performance problem in monitoring window	
SPR-102779	HCI reports error, but remote display correct opened	
SPR-102780	missing start script CGS logger	
SPR-102781	CLS Batch Compile is very slow in Oracle 11gR2	
SPR-102782	Unexpected popup of Message Details	
SPR-102783	Unexpected changing of the cursor	
SPR-102784	Message Window User Interface improvement	

4.9 Temporary fixed Problems

4.9.1 Further Open Problems

- SPR-100868 - SAS linked with the CGS API and using posix.process_primitives.exit_process are hanging. Use the system call _exit (not exit !) instead of posix.process_primitives.exit_process.

4.9.2 Known Restrictions

- It is not possible to prepare a telecommand (SWOP, FLAP, PUS_TC, and TC) via CIS, if this telecommand is defined with garded parameters in the parameter lists.
- SPR-101245 - CIS clients to implement sufficient large timeouts that can deal with a 10 seconds delay of 'Login' or 'subscribe<service>' requests.
- Not all interfaces for the new CGS IDL 2.0 are implemented in CGS:
  Note: unsupported `'oneway void'` calls are stubs, just generating a debug message
  `'<Procedure_Name> -- to be implemented --'` with debug output enabled.

  - o - not (yet) supported by CGS:
    - Calibration description as telemetry property:
      - o not yet supported by CGS: no calibration updates are sent by CIS
    - Telemetry report deliveries:
      - o Telemetry data reports not yet supported:

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- `Telemetry.getTelemetryReport` raises `ServiceNotAvailable`.
- `Telemetry.cancelTelemetryReport` is empty.
- `TelemetryClient.telemetryReportDelivery` is never called by CIS.

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5. Installation Procedures

This software shall be used on Intel PC with SUSE Linux Enterpriser Server 10 (SLES10).

5.1 Complete Installation

For a complete installation follow the instructions of CGS installation manual CGS-RIBRE-SUM-0002.

Remark: The actual CGS installation manual is on DVD below /<mountpoint>/doc/manual.

5.2 Upgrade Installation (based on CGS 7.2.2 / 7.3.0 / 7.3.1)

For an upgrade installation follow the next instructions:

The following syntax

cgsadmin> **ls -al**

means the shell command *ls -al* executed as user cgsadmin,

oracle> **cd**

means the shell command *cd* executed as user oracle.

5.2.1 Needed passwords

1. <cgsadmin> (UNIX user)
2. root (UNIX user)
3. <oracle> (UNIX user)
4. <MDB_ADM> (oracle user)

5.2.2 Installation steps

1. login as user <cgsadmin> on DB server host

2. cgs shutdown via cgs start_center

3. stop command history / central distributor (on command history server)
   cgsadmin> **$CGS_HOME/gsaf/dbs/bin/common/stop_cmd_history**
   cgsadmin> **$CGS_HOME/gsaf/dbs/bin/common/stop_central_distributor**

4. quit cgs start_center

5. terminate the cgs_daemon
   cgsadmin> **killall -9 cgs_daemon**

6. Oracle data export

   - MDB data export

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- MDB user export
- Command History export (optional)
- TRDB export (optional)

- Steps
  cgsadmin> **setenv CGS_SAVE <YourCGS_SAVE>**
  (e.g.: setenv CGS_SAVE $HOME/CGS_SAVE)
  cgsadmin> **mkdir $CGS_SAVE**
  cgsadmin> **$CGS_HOME/gsaf/cgsi/util/common/saveCGSconf**

7. Oracle database de-installation

- MDB de-installation
- Command History de-installation (optional)
- TRDB de-installation

- Steps
  remove TRDB data files
  cgsadmin> **rm -rf $VICOS_CEN_DBS_HOME/***

  Login as user **oracle** on database server
  get the Oracle SIDs for MDB, TRDB and Command History
  oracle> **more /etc/oratab**

  delete the databases
  oracle> **$ORACLE_HOME/bin/dbca -silent -deleteDatabase -sourceDB <ORACLE_SID for MDB>**
  oracle> **$ORACLE_HOME/bin/dbca -silent -deleteDatabase -sourceDB <ORACLE_SID for TRDB>**
  oracle> **$ORACLE_HOME/bin/dbca -silent -deleteDatabase -sourceDB <ORACLE_SID for Command History>**

8. Oracle upgrade

- de-install Oracle 11gR1 Enterprise edition
  as user **oracle** on database server:
  oracle> **$ORACLE_HOME/oui/bin/runInstaller -deinstall -silent -force ORACLE_HOME=$ORACLE_HOME "REMOVE_HOMES={$ORACLE_HOME}"**

- install Oracle 11gR2 Standard One edition
  install glibc-2.4-31.63 and glibc-devel-2.4-31.63 or higher version if not already done (see SPR-102552)

  get the actual glibc version
  cgsadmin> **rpm -qa | grep glibc**
  install glibc-2.4-31.63 and glibc-devel-2.4-31.63 or higher version as **root** user

  as user **oracle** on database server:
  oracle> **unset ORACLE_HOME**

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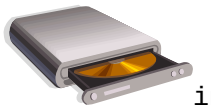
oracle> **unset TNS_ADMIN**
oracle> **/mount_point_Oracle/database/runInstaller**

Step	Installation Step	Action
1	Configure Security Updates Deselect ***I wish to receive security updates via My Oracle Support*** Window *My Oracle Support .. Not Specified* pops up Select ***Yes***	***Next***
2	Download Software Updates Select ***Skip Software updates***	***Next***
3	Installation Option Select ***Install database software only***	***Next***
4	Grid Installation Option Usually leave the default***Single instance database installation*** or choose ***Oracle Real Application Clusters database installation***	***Next***
5	Product Languages Leave the default ***English***	***Next***
6	Database Edition Select the desired database edition: Single instance database: choose ***Standard Edition One*** Oracle RAC database: choose ***Standard Edition***	***Next***
7	Installation Location Leave the defaults	***Next***
8	Operation System Groups Leave the defaults	***Next***
9	Prerequisite Checks In case of warnings: Select ***Fix & Check Again*** Execute the script as root and press ***OK***	
10	Summary	***Install***
11	Install Product Execute the script ***root.sh*** as root	***OK***
12	Finish	***Close***

Change default environment variables in */etc/profile.d/oracle.sh* as ***root*** *user*:
root> **vi /etc/profile.d/oracle.sh**
ORACLE_HOME=$CGS_BASE/product/11.2.0/dbhome_1

ORACLE_SID=<name of your global database>

9.  insert CGS DVD CGS_7.3.2

10. mount DVD

11. install all products from DVD
cgsadmin> **/<mountpoint>/installer.sh**

Select Exit (after installation)

12. unmount DVD

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13. update the Oracle JDBC driver

    cgsadmin> **$CGS_HOME/patches/update_ojdbc.sh**

14. update CGS directory structure and delete unwanted files

    cgsadmin> **$CGS_HOME/patches/patch_cgs.sh**

15. installation of needed databases

- MDB Data Dictionary
  cgsadmin> **cd $GSAF_HOME/mda/config/mdb/install**
  cgsadmin> **zcat <YourDadiDeliveryLocation>/<YourDadiDeliveryFile>.tar.Z | tar -xvf -**
- install databases
  cgsadmin> **$CGS_HOME/gsaf/config/bin/configurator.tcl &**

Installation Step	Optional	Action
Change ORACLE_HOME for MDB	No	Select tab Oracle/MDB ORACLE_HOME: replace ***11.1/db_1*** by ***11.2.0/dbhome_1***
Change ORACLE_HOME for TRDB	Yes Not needed in case of work without TRDB Not needed if use the same database for MDB and TRDB	Select tab TRDB ORACLE_HOME: replace ***11.1/db_1*** by ***11.2.0/dbhome_1***
Change ORACLE_HOME for CMDH	Yes Not needed in case of work without Command History Not needed if use the same database for MDB and TRDB	Select tab CMDH ORACLE_HOME: replace ***11.1/db_1*** by ***11.2.0/dbhome_1***
Save Configuration	No	File -> Save
Create Dot-files	No	Create -> Dotfiles
Create MDB Instance	No	Install -> Oracle MDB Instance
Create TRDB Instance	Yes Not needed in case of work without TRDB Not needed if use the same database for MDB and TRDB	Install -> Oracle TRB Instance
Create CMDH Instance	Yes Not needed in case of work without Command History Not needed if use the same database for MDB and CMDH	Install -> Oracle CMDH Instance

- Install and initialize the MDB

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From still running configurator:

Installation Step	Action
Install MDB	Install -> Mission Database Enter the right DADI export directory Enter the desired MDB instance range
Initialize MDB	Install -> Initialze Mession Database
Exit Configuratur	File -> Exit

- **set new environment because of change of ORACLE HOME and LD LIBRARY PATH**

  cgsadmin> **exit (this shell)**

- install exported MDB users

  Open **new** shell as cgsadmin user
  cgsadmin> **setenv CGS_SAVE <YourCGS_SAVE>**

  start the configurator again
  cgsadmin> **$CGS_HOME/gsaf/config/bin/configurator.tcl &**

Installation Step	Action
Install exported MDB Users	Upgrade -> Install Exported MDB Users

- install 7.3.2 TRDB (optional - not needed in case of work without TRDB)
  cgsadmin> **$CGS_HOME/gsaf/dbs/util/common/add_trdb_user**

  From still running configurator:

Installation Step	Action
Install TRDB	Install -> Test Result Database Please enter (1 / 2 / ALL / EXIT) : ***ALL***

- installation of 7.3.2 command history
  (optional - not needed in case of work without command history)

  cgsadmin> **GSAF_HOME/dbs/util/common/command_history/add_cmd_history_user**

  From still running configurator:

Installation Step	Action
Install Command History	Install -> Command History

- Quit configurator

  From still running configurator:

Installation Step	Action
Exit Configuratur	File -> Exit

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16. Oracle import data

    - import MDB data
      cgsadmin> **$MDA_HOME/config/mdb/upgrade/import**

      ```
      Do you wish to start the import [y] ? <Return>
      Enter OWNER NAME of the Oracle MDB account [<MDB instance name>_ADM]     : <Return>
      Enter OWNER PASSWORD of the Oracle MDB account [<MDB instance name>_ADM] : <Return>

      Enter BASENAME of the datafiles
      (INCLUDING THE PATH BUT WITHOUT TRAILING '.<number>')
      $CGS_SAVE/export_MDB.<MDB instance name>_ADM.<YY_MM_DD>

      The logging-file stores all display outputs during the script execution
      in the users HOME (/cgs_inst/users/cgsadmin) directory
      Default logging filename: import_to_CGS_DEVELOPMENT_ADM.13_02_19.log
      Enter logging-file name [import_to_CGS_DEVELOPMENT_ADM.13_02_19.log] : <Return>
      ```

    - import TRDB data (optional)
      cgsadmin> **$GSAF_HOME/dbs/util/common/upgrade_tool -import $CGS_SAVE/trdb.content**

    - import command history data (optional)
      cgsadmin> **$GSAF_HOME/dbs/util/common/command_history/import_partitions -f $CGS_SAVE/CH_<from_date_to_date>.exp**

17. recreate your SCOE data (generate SCOE files)

    CGS requests to recreate SCOE data due to USS extensions.

18. rebuild your CSS models

    CGS requests to rebuild all CSS models due to CSS extensions.

19. rebuild your special application software (SAS)

    CGS requests to rebuild SAS.

20. reboot server and if the server is ready, reboot all clients

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6. Acronyms

AD	Applicable Document
ADD	Architectural Design Document
AP	Automated Procedure
ASCII	Americal Standard Code for Information Interchange
ATP	Authorization to Proceed
ATV	Autonomous Transfer Vehicle
CCB	Configuration Control Board
CCU	Configuration Control Unit
CCSDS	Consultative Commitee for Space Data System
CGS	Core Ground System
CDU	Configuration Data Unit
CLS	CGS Language System
COTS	Commercial Off-The-Shelve
CPL	Crew Procedure Language
CPU	Central Processing Unit
D&D	Design and Development
DMS	Data Management System
DOF	Degree of Freedom
EGSE	Electrical Ground Support Equipment
EM	Engineering Model
EQM	Engineering Qualification Model
ESA	European Space Agency
ETM	Electrical Test Model
FDIR	Fault Detection, Isolation and Recovery
FM	Flight Model
GMT	Greenwich Mean Time
GNC	Guidance Navigation Control
GPS	Global Positioning System
HCI	Human-Computer Interface
HL	High Level
HLCL	High Level Command Language
HW	Hardware
ICD	Interface Control Document
IF	InterFace
ISS	International Space Station
LL	Low Level
MDB	Mission Database
MET	Mission Elapsed Time
MMS	Matra Marconi Space
N/A	Not Applicable
PDB	Project Data Base
PROM	Programmable Read Only Memory
RAM	Random Access Memory
RD	Reference Document
RFW	Request for Waiver
ROM	Read Only Memory
RV	RendezVous
S/C	SpaceCraft
SCCB	Software Configuration Control Board
SOC	Statement of Compliance
SPR	Software Problem Report
SRD	Software Requirements Document
SUM	Software User Manual
SW	SoftWare
SWRU	Software Replaceable Unit
TBC	To Be Confirmed
TBD	To Be Defined
TC	TeleCommand
TM	TeleMetry
TRR	Test Readiness Review
UCL	User Control Language
URD	User Requirements Document
UTC	Universal Time Coordinated
VCD	Verification Control Document
VTP	Validation Test Plan

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